

### III. Remarks

Allowed claims 6, 12, and 18 have been amended to place them in independent form; claims 1-5, 7-11, and 13-17 have been cancelled; and new claims 19-35 have been added.

New independent claim 19 has been drafted to distinguish over the patents applied in the above office action and is allowable for the following reasons.

Although some of the previous claims were rejected under 35 U.S.C. §102 as being anticipated by Reimers, et al., this patent is not applicable to claim 19 for the following reasons.

New claim 19 recites sensing data associated with the fracturing; storing the data in the well bore; converting the data into digital signals in the well bore; passing the digital signals to a transmitter in the well bore; converting the digital signals at the transmitter to analog signals; transmitting the analog signals to a receiver located in the well bore; converting the signals at the receiver to signals that can be transmitted to the ground surface; and transmitting the signals from the receiver to the ground surface.

The PTO provides in MPEP §2131 that:

*"[t]o anticipate a claim, the reference must teach every element of the claim."*

Therefore, to support these rejections with respect to new claim 19, the Reimers, et al. patent must contain all of the above-claimed elements of the claim. However, this patent does not disclose sensing data associated with the fracturing; storing the data in the well bore; converting the data into digital signals in the well bore; passing the digital signals to a transmitter in the well bore; converting the digital signals at the transmitter to analog signals; transmitting the analog signals to a receiver located in the well bore; converting the signals at the receiver to signals that can be transmitted to the ground surface; and transmitting the signals from the receiver to the ground surface.

As a result, the previous rejections based on 35 U.S.C. §102 cannot be supported by the Reimers, et al. patent as applied to new claim 19.

Some of the previous claims were rejected under 35 U.S.C. §103(a) as being unpatentable over Reimers, et al. in view of Restarick, et al. However, this rejection is not applicable to claim 19 for the following reasons.

As the PTO recognizes in MPEP §2142:

*The examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. If the examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of nonobviousness.*

The examiner clearly cannot establish a *prima facie* case of obviousness in connection with claim 19 since 35 U.S.C. §103(a) provides that:

*[a] patent may not be obtained ... if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains ... (emphasis added)*

Thus, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, Reimers, et al. and Restarick, et al., alone, or in combination, do not teach sensing data associated with the fracturing; storing the data in the well bore; converting the data into digital signals in the well bore; passing the digital signals to a transmitter in the well bore; converting the digital signals at the transmitter to analog signals; transmitting the analog signals to a receiver located in the well bore; converting the signals at the receiver to signals that can be transmitted to the ground surface; and transmitting the signals from the receiver to the ground surface.

Therefore, it is impossible to render the subject matter of claim 19 as a whole obvious based on any combination of the patents, and the above explicit terms of the statute cannot be met. As a result, the examiner's burden of factually supporting a *prima facie* case of obviousness clearly cannot be met with respect to claim 19, and a rejection under 35 U.S.C. §103(a) is not applicable.

There is still another compelling, and mutually exclusive, reason why the Reimers, et al. and Restarick, et al. patents cannot be combined and applied to reject claim 19 under 35 U.S.C. §103(a).

The PTO also provides in MPEP §2142:

*[T]he examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination whether the claimed invention "as a whole" would have been obvious at that time to that person. ...[I]mpermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.*

Here, Reimers, et al. and Restarick, et al. do not teach, or even suggest, the desirability of the combination since neither teaches or suggests sensing data associated with the fracturing; storing the data in the well bore; converting the data into digital signals in the well bore; passing the digital signals to a transmitter in the well bore; converting the digital signals at

the transmitter to analog signals; transmitting the analog signals to a receiver located in the well bore; converting the signals at the receiver to signals that can be transmitted to the ground surface; and transmitting the signals from the receiver to the ground surface.

Thus, neither of these patents provides any incentive or motivation supporting the desirability of the combination. Therefore, there is simply no basis in the art for combining the references to support a 35 U.S.C. §103(a) rejection of claim 19.

In this context, the MPEP further provides at §2143.01:

*The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. (emphasis in original)*

In the above context, the courts have repeatedly held that obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination. In the present case it is clear that the examiner's combination arises solely from hindsight based on the invention without any showing, suggestion, incentive or motivation in either reference for the combination as applied to claim 19. Therefore, for this mutually exclusive reason, the examiner's burden of factually supporting a *prima facie* case of obviousness clearly cannot be met with respect to claim 19, and the rejection under 35 U.S.C. §103(a) is not applicable.

There is still another mutually exclusive, reason why the Reimers, et al. patent cannot be applied as a primary reference to reject claim 20 under 35 U.S.C. §103(a). In particular, the present invention relates to a system and method for fracturing a subterranean formation penetrated by a well bore while the Reimers, et al patent is limited to conducting seismic surveys, and utilizing the improved seismographs to determine the type and course of well bores for developing a field (see column 1 lines 27-29 of the patent).

35 U.S.C. §103(a) requires that obviousness be determined on the basis of whether at the time the invention was made a person of ordinary skill in the art to which the subject matter pertains would have found the claimed invention as a whole obvious. Although one of ordinary skill in the art is presumed to be aware of all prior art in the field to which the invention pertains, he or she is not presumed to be aware of prior art outside that field and the field of the problem to be solved, i.e., nonanalogous art. Accordingly, in assessing the propriety of any assertion of prior art as a basis for a *prima facie* case of obviousness, one must determine the scope or bounds of the knowledge of one of ordinary skill in the art, i.e., the analogous art presumably known by one of ordinary skill in the art.

Here, since seismic surveys are clearly outside the field of well fracturing, the Reimers, et al patent is from a nonanalogous art, thus precluding any *prima facie* case of obviousness using this patent as a reference.

Thus, for this independent reason alone, the examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met, and the rejection under 35 U.S.C. §103(a) should be withdrawn.

It is clear from all of the above that claim 19 is allowable

New independent claim 28 is a system version of claim 19, and therefore is allowable for the reasons indicated above. Dependent claims 20-27 and 29-35 depend from, and further limit, independent claims 19 and 28 respectively, in a patentable sense and therefore are allowable as well.

In view of all of the above, the allowance of claims 19-35 is respectfully requested.

The examiner is invited to call the undersigned at the below-listed telephone number if a telephone conference would expedite or aid the prosecution and examination of this application.

Respectfully submitted,

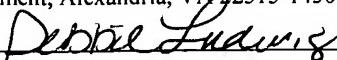


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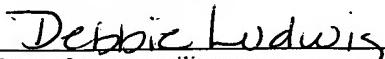
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